Q: Is the use of antibiotics in farm animals increasing antibiotic resistance in humans?

A: The extent to which antibiotic use in animals actually affects human health is difficult to impossible to measure. We don't have good, scientifically definitive ways to measure it. However, one panel of experts estimates that 96 percent of antibiotic resistance in humans is due to *human* use of antibiotics and not transferred from animal uses.[1]

Risk assessments have been conducted on many animal antibiotics to determine the potential for antimicrobial resistance. While one can never completely eliminate risk, the assessments determined the risk from using these products was extremely low and the social benefits of using antibiotics outweigh the miniscule risk of antimicrobial resistance.[2]

Q: Would antibiotic resistance in humans end if antibiotic use on farms was eliminated?

A: No. A recent Institute of Food Technologists' expert panel report stated that correlating the risk of antibiotic use in animals and antibiotic resistance in humans is not possible without more research.[3] Two key findings include:

- *Meat from livestock raised with and without antibiotic use was shown to contain antibiotic-resistant bacteria.*
- *Antibiotic-resistant bacteria develop from many factors including human use of antibiotics and routine household use of disinfectants like antibacterial soap. Use of antibiotics in animals is only one small contributing factor in the overall picture.*

Q: How do consumers know that the food products they consume are safe?

A: The FDA does not allow the use of antibiotics in farm animals until it can prove meat consumed from treated animals is safe. Further, the FDA has mandated a withdrawal time for each antibiotic used. Specifically, food or milk from animals that have been treated with an antibiotic may not enter the food supply until a predetermined amount of time has elapsed since the animal's last dosage. The withdrawal period is specified for each drug.

Random and on-going samples of meat and milk are tested to ensure adherence to the withdrawal regulations. Samples found to be non-compliant are destroyed and the producer faces stiff penalties.

Q: Isn't the real issue the use of antibiotics for nutritional efficiency?

A: The appropriate use of antibiotics for treatment, prevention and nutritional efficiency does not negatively impact food safety. There are animal health and societal benefits to using antibiotics to increase nutritional efficiency. Experience in Europe, where the political decision has been made to ban this type of antibiotic use, shows that there is some disease prevention benefit to using antibiotics at nutritional efficiency levels. And, even after 8 years, there has been no demonstrated human health benefit to a ban of this type. In addition, animals that convert feed efficiently consume less feed and produce less waste. That means more corn available for the production of renewable fuels and less manure for the producer to manage.

Q: What about organic meats? Are they safer?

A: No. The nutritional and safety profiles of organic meats are not different than conventionally-raised product. Only growing, handling and processing methods differ. There have been many studies that have proven that bacteria, even those resistant to antibiotics, can be found in both types of meat.[4]

Sources

[1] Casewell and Bywater, Journal of Antimicrobial Chemotherapy 46: 639-645, 2000.
[2] Institute of Food Technologists, www.ift.org, Antimicrobial Resistance: Implications for the Food System, July 14, 2006.
[3] Ibid.
[4] Gabreyes, Thakur and Morrow. Comparison of prevalence, antimicrobial resistance and occurrence of multi-drug resistant *Salmonella* and antimicrobial-free and conventional pig production, *J.Food Prot.* 69:743-748, 2006.

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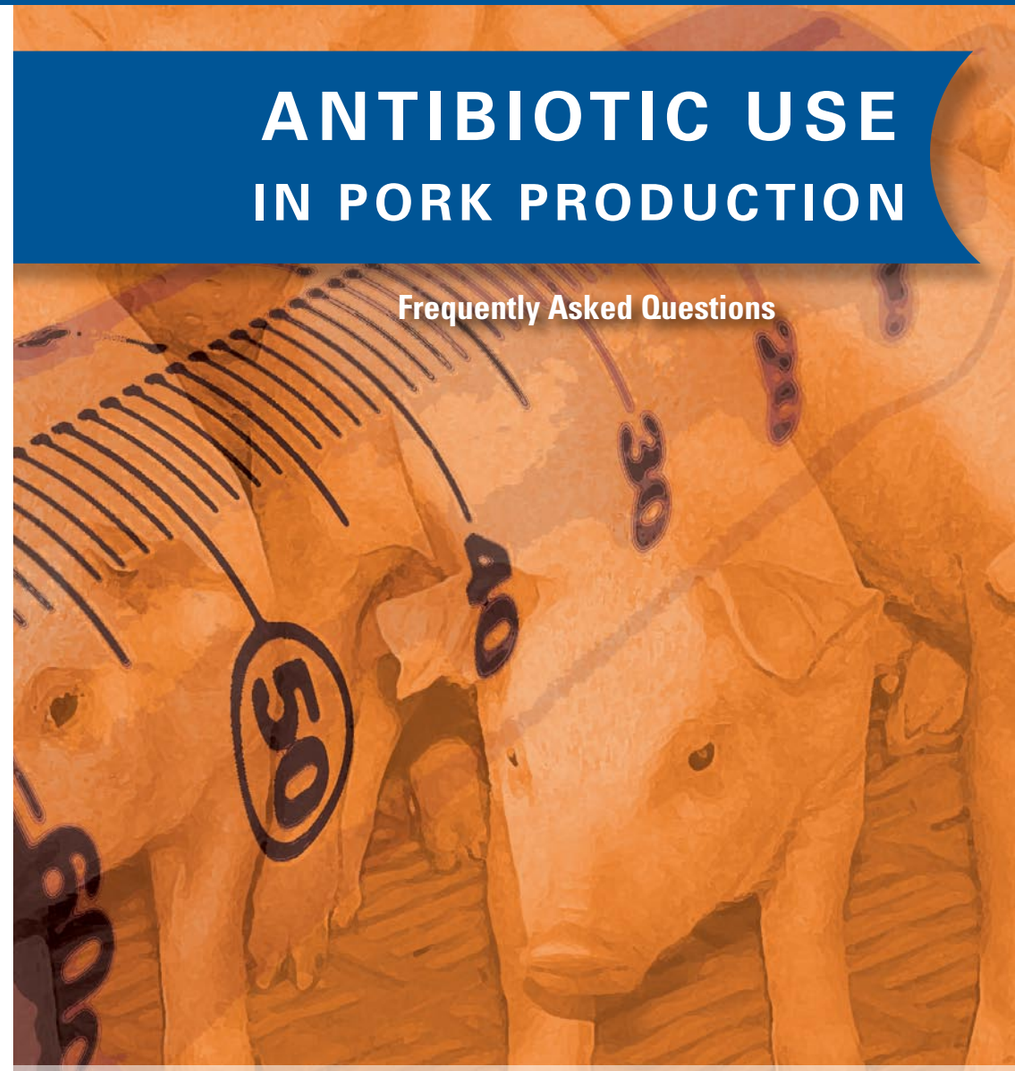
ANTIBIOTIC USE IN PORK PRODUCTION

Frequently Asked Questions



Pork producers use antibiotics for three purposes:
TREATMENT OF ILLNESS, PREVENTION OF DISEASE, AND TO IMPROVE THE NUTRITIONAL EFFICIENCY OF THEIR ANIMALS.

pork.org or the Pork Checkoff Service Center @ (800) 456-PORK

pork checkoff

FREQUENTLY ASKED QUESTIONS ANTIBIOTIC USE in pork production

Concerns have been expressed about the use of antibiotics in pork production. The National Pork Board supports the use of antibiotics only when they provide demonstrable benefits and has urged producers to:

- *take appropriate steps to decrease the need for their application;*
- *assess the advantages and disadvantages of all uses of antibiotics;*
- *complete the Pork Quality Assurance Program and fully implement the management practices described for responsible use of animal health products into their daily operations.*
- *follow the Take Care responsible use guidelines*

Q. How are antibiotics used in pork production?

A. Pork producers use antibiotics for three purposes: to treat illness, to prevent disease and to improve the nutritional efficiency of their animals. Antibiotics can be given by injection of individual animals or delivered through feed or water. Producers and their veterinarians use their experience and knowledge in combination with scientific information to decide when to use antibiotics in their pigs.

Q: What is the industry's position on the use of antibiotics in pork production?

A: The National Pork Board believes it is essential to public health and food safety, animal health and well-being, and the environment to maintain the effectiveness and availability of antimicrobials. All decisions affecting their availability should be based on sound science. The National Pork Board's full position on Antibiotic Use in Pork Production[1] can be found online at http://www.pork.org/PorkScience/Documents/PORKSAFETY%20fact.pdf. Additionally, the National Pork Board, through the Pork Checkoff, launched the *Take Care – Use Antibiotics Responsibly* program in 2005. This program helps assure the responsible use of antibiotics by producers.

TAKECARE
USE ANTIBIOTICS RESPONSIBLY

Q. Aren't antibiotics in feed only used by large producers?

A. A 2000 survey conducted by the National Animal Health Monitoring System (NAHMS) determined that the use of antibiotics was not related to the size of operation. In fact, a similar percentage of small producers and large producers report using antibiotics in feed. More NAHMS information can be found online at http://www.aphis.usda.gov/vs/ceah/ncahs/nahms/swine/index.htm

Q: Are there other factors besides antibiotic use that impact animal health?

A: Yes. The use of animal health products, including antibiotics, is only one part of a comprehensive herd health program. Biosecurity, diagnostics, vaccination, facility maintenance and animal care contribute to the farm's animal health picture.

Q: What is "antibiotic resistance"?

A: "Antibiotic resistance" refers to bacteria that are able to withstand exposure to antibiotics and, in fact, survive. As is the case with every living organism, bacteria respond to threats in their environment to survive as part of their natural evolution. One such response is the development of resistance following exposure of the bacteria to antibiotics. Some medical doctors and veterinarians are concerned about antibiotic resistance because it might limit the effectiveness of antibiotics to fight infections.

Q: What else is the industry doing to make sure that resistance doesn't become a big problem?

A: Pork producers are committed to protecting public health and preserving animal health and well-being by using antibiotics responsibly as outlined in the *Take Care – Use Antibiotics Responsibly* program. Over 50 million pigs are produced each year by producers who have endorsed this proactive program. We encourage you to learn more about the specifics of the Take Care program by calling (800) 456-PORK or going to pork.org.

pork.org or the **Pork Checkoff Service Center @ (800) 456-PORK**

Q: Is it safe to use antibiotics in food animals?

A: Yes. The U.S. Food and Drug Administration (FDA) does not approve the use of antibiotics until they undergo a vigorous review for safety to animals, humans and the environment. The FDA approval process assures food products from animals treated with antibiotics are safe. Pork producers and veterinarians are committed to protecting public health, animal health and animal well-being through the responsible use of antibiotics.